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CENTRAL INTELLIGENCE AGENCY

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2. The original plan, prepared by the American Foundation Company for approval of the Latvian Government, provided for a dam and power plant to be built on solid dolomite and devonian marl rocks at Kegums on the River Daugava near Riga. The water level behind the dam was to be 32 meters above sea level; below the dam the level to be 16.25 meters providing a fall of 15.75 meters; the dam to form a lake 45 km long and 16 square km in area, built of concrete and to extend 26.4 meters above sea level with marble water gates extending above 5.6 meters providing total height of 32 meters; about 233 thousand cubic meters of concrete would be needed. The building for the power station is on a continuation of the dam on the right bank of the river.

3. As planned, two turbines were to be installed initially, each of 15 thousand kw capacity. Later additional turbines were to be added to provide eventual total capacity of 60 to 70 thousand kw. Electric current was to be produced at 11 thousand volts transformed to 120 thousand volts at the transformer station near the turbine building, stepped down to 20 thousand volts at a transformer station in Riga and finally after purchase by the municipality of Riga down to six and three thousand volts. A double wire transmission line was to be run from Kegum to Riga on iron masts.

4. Projected power was to be produced by the plant in millions of kwh as follows:

	1936	1940	1945	1950	1955
Riga - city	82	104	130.5	157.5	165
For Latvia net	8.5	24.5	44.	64.	84.
For industry near Riga	6.5	17.	30.	43.	56.
For nitrate factory (15-30,000 tons fertilizer)	50.	50.	50.	100.	100.
Total	147.	195.5	254.5	364.5	405.

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5. Assuming the installation of 70 thousand kw turbines, average anticipated monthly capacity in kw with average water supply follows:

	Average Monthly Capacity - kw	Average Water Flow Thru Turbines - cubic meters/sek*
January	38,800	313
February	32,500	263
March	68,200	570
April	65,700	2,050
May	67,600	1,370
June	58,600	480
July	42,200	340
August	46,000	373
September	39,700	320
October	55,000	450
November	70,000	583
December	61,500	506

*"sek"means cubic meters per second

With an average fall of 14.4 meters there are about 330 thousand kw-h for regulation. By lowering the level of the lake 0.8 meters, about 10 million cubic meters of water becomes available. In dry seasons deficiency to be made up by the thermal plant at Riga with capacity of 35 thousand kw-h.

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6. The Kegum plant was built by the Swedes between 1935 and 1939.

7. [redacted]

8. [redacted]

It was intended to install four turbines at the power station at Kegums. Three of them were ready before World War II. Every turbine installed was about 17,500 kw or about 23 thousand HP strong, with a generator capacity of 22,500 kwa. With two turbines in operation, it was generally possible to cover all consumption of electric current including even the Liepaja (city) network. Only at consumption peaks, i.e., in the late afternoon when lighting hours began, was it necessary to operate the third turbine. When the flow of water through the power station was at minimum (about 90 cubic meters per second) only one turbine could be operated. This happens sometimes in February but not for a long period of time. /Because of hard and deep freezing in watershed./ The large lake above the dam at Kegums stores up immense reserves of water which alleviates occasional acute shortages. In such cases and especially during the daily high consumption hours, assistance was given by the Riga thermal station with its about 35 thousand kw. It is said that shortly before World War II, an underground thermal station with about 10 thousand kw capacity was constructed in Sampeteris (?), the so-called "Barbelites Termisaw Spekstacija" (the thermal power station of Barbelite). Sampeteris is one of the most western suburbs of Riga on the left bank of the River Daugava.

9. As far as known, the Kegums power station suffered but slightly during the German retreat in 1944. This is the opinion of Latvian engineers working in Swedish factories producing spare parts for Kegums under Soviet orders. According to other information, some of the gates of the dam had been damaged as well. Judging from Soviet reports, they boast that they have supplied a new turbine to Kegums. One may presume this to be the fourth turbine, because experts think that none of the existing three turbines was destroyed in 1944. The Soviets reported that this turbine was made by a Leningrad factory. this turbine was secretly built in Sweden and then taken to Leningrad where some trifle was added and thereafter, with a great display of propaganda, delivered further to Kegums as a Soviet product. It is impossible to find out the truth. The Riga thermal power station is still in operation. Its present capacity, however, is unknown.

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